

 PROPERTY OF CAMERON	DRAWN BY ERIC WEHNER	DATE 5 DEC 96	REVISION B1	E.B. 598H
	APPROVED KENT BAILEY	DATE 5 DEC 96		Sheet 1 of 1

THE CAMERON DRILLING CHOKE

API Specification 6A refers to chokes as being designed to "...include restrictions or orifices for controlling the flow rate of well fluids. These chokes are not intended to be used as shutoff valves." The Cameron drilling choke was originally designed with that intention, as a device to control back pressure while circulating out "kicks" through the choke manifold, so a positive seal feature was not included. Some years after the drilling choke was introduced, market demands dictated that Cameron add a positive-sealing gate and seat as an option.

With the positive-sealing gate and seat, the drilling choke has the capability of sealing against downstream pressure (pressure applied through the outlet) as well as sealing in the intended manner against upstream pressure (applied through the inlet). **Sealing against downstream pressure is not an intended function of the design.** There is no seat retention feature designed into the choke, so sealing against downstream pressure produces a thrust load on the actuator components nearly equal to the pressure acting across the entire seat area. Since the original design was not intended for positive sealing, the manual actuator bolting and thrust bearing components were designed to carry the load resulting from pressure acting across the stem area only.

For this reason, the Cameron drilling choke should **NEVER** be used to seal against differential pressure on the downstream (outlet) side. It should be used for positive shut-off against upstream pressure only. (Pressure applied through the inlet)

WARNING: If the Cameron drilling choke is used for positive shut-off and pressured from the downstream (outlet) side only, catastrophic failure of the manual actuator bolting or other components can occur. This could result in the detachment of major components under high pressure, posing serious risk to personnel and equipment.

The manually-actuated drilling choke **can be modified** to make it capable of withstanding 15,000 psi applied from the downstream side. The modification replaces the cap screws which attach the actuator housing to the actuator body with a screwed connection. It is described in EB-629H.

A special warning tag will be attached to new assemblies manufactured in the future. This tag is available from Cameron as part number 2127519-01. It is recommended that current owners and operators of Cameron drilling chokes contact Cameron to obtain this warning tag and/or to have Cameron service personnel install the tag.